Patent
Case No.: 54642US002



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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| First Named Inventor: | DANIELS, MICHAEL P. | | |
| Application No.: | 09/367455 | Group Art Unit: | 1714 |
| Filed: | August 13, 1999 | Examiner: | P. Niland |
| Title: | WET SURFACE ADHESIVES | | |

## BRIEF ON APPEAL

Board of Patent Appeals
and Interferences
Commissioner for Patents
Washington, DC 20231

CERTIFICATE OF MAILING
I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231 on:
10 January 2003 Carolyn V. Peters
Date Signed by: Carolyn V. Peters

Dear Sir:

This is an appeal from the final Office Action mailed on August 13, 2001. A Notice of the Appeal was filed with the USPTO on November 18, 2001. This Brief is being filed in triplicate. The fee required under 37 CFR § 1.17(c) for the appeal should be charged to Deposit Account No. 13-3723.

## REAL PARTY IN INTEREST

The real party in interest is 3M Company (formerly known as Minnesota Mining and Manufacturing Company) of St. Paul, Minnesota and its affiliate 3M Innovative Properties Company of St. Paul, Minnesota.

## RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals or interferences.

## STATUS OF CLAIMS

All of the claims are currently pending.

## STATUS OF AMENDMENTS

No amendment has been filed after the final rejection.

## SUMMARY OF THE INVENTION

Applicants respectfully point out that the present invention is directed to pressure sensitive adhesive that exhibits superior adhesion to a wet surface. A "wet stick" adhesive is not necessarily an adhesive that is wet, but rather refers to the substrate that may be subjected to water or is actually immersed in water. Referring to the specification at page 5, lines 26-29, and a '*wet stick adhesive' refers to a material that exhibits pressure-sensitive adhesive properties when adhered to a substrate that has been flooded with water. Wet-stick adhesives may or may not demonstrate pressure-sensitive adhesive properties under dry conditions.*" (Emphasis added).

## ISSUES ON APPEAL

1. Whether the Examiner erred by rejecting the claims under 35 U.S.C. § 102(b) as being anticipated by Blake?

2. Whether the Examiner erred by rejected the claims under 35 U.S.C. § 103(a) as being obvious in view of Blake?

## GROUPING OF CLAIMS

The appealed claims will stand or fall together. No admission, however, is being made with respect to the obviousness of the subject matter of the dependent claims with respect to the subject matter of the independent claims.

## ARGUMENTS OF APPELLANTS

***Rejection Under 35 U.S.C. 102(b)***

Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,569,960 (Blake).

The Examiner has stated "Blake discloses a PSA and method of making it which fall within the scope of the instant claims."

Appellants respectfully submit, "Anticipation requires identity of invention. The claimed invention, as described in appropriately construed claims, must be the same as that of the reference in order to be anticipated." *See Glaverbel Société Anonyme v. Northlake Marketing & Supply Inc.*, 45 F.3d 1550, 33 USPQ.2d 1496, 1498 (Fed. Cir. 1995).

The cited reference is directed to a *normally tacky and pressure-sensitive water-dispersible adhesive* especially suitable for splicing carbon-less paper, comprising the blended reaction product of: (a) a copolymer consisting essentially of (1) a (meth)acrylate and (2) an acid comonomer, (b) an ethoxylated plasticizing component, (c) and alkaline hydroxide. The

compositions of the Blake reference and the present invention are different, not just functionally, but also compositionally different. Note that Blake requires the use of a hydroxide salt and the present invention does not. A water dispersible adhesive is one that disperses in water, that is loses the cohesiveness of the adhesive, thus making the adhesive ideal for recycling and the like.

The present invention claims an adhesive that is a tacky, hydrophilic pressure sensitive adhesive that retains its "stick" properties in water, whereas the reference is a water dispersible adhesive. In fact, the adhesives of the present invention may not even be sticky under dry conditions.

Water dispersibility means that the adhesive will disperse when exposed to water, which is appropriate if one seeks to recycle paper. Furthermore, the PSA composition in Blake is water-dispersed prior to coating and **must be dried** before the composition behaves as a PSA. This PSA does not bond to an adherent in the presence of moisture, *in contrast to the present invention, which does bond to an adherent in the presence of moisture.* In summary, drying of the water-dispersion in Blake is essential to the formation of a PSA.

The adhesive of the present invention is comprised of the polymerization reaction product of (1) a (meth)acrylate, (2) a hydrophilic acid comonomer and (3) a non-reactive plasticizer. In the presence of water, the adhesive of the present invention remains intact and sticky, therefore is particularly useful for adhering to wet surfaces.

Appellants respectfully submit that the claims are not identical and therefore the cited reference fails to anticipate the claims of the present invention. In view of this failure to anticipate the claims, Appellants respectfully request that all 35 U.S.C. § 102(a) rejections be withdrawn.

***Rejection under 35 U.S.C. 103(a)***

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,569,960 (Blake).

The Examiner has stated "Blake discloses a PSA and method of making it which fall within the scope of the instant claims." The Examiner further states that it "would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the instantly claimed combinations of ingredients and amounts thereof in the PSA of the patentee because they are encompassed by the patentee and would have been expected to give a PSA having the properties of the PSA of the patentee."

Appellants respectfully submit that it would not have been obvious, as stated by the Examiner. The cited reference is directed to a water-dispersible adhesive for splicing paper rolls. The present invention is directed to an adhesive that is well suited for sticking onto a wet surface, such as a wet road, a wet wall, etc.

Appellants suggest that it would not have been obvious to modify the cited reference to make an adhesive that is well suited for wet surfaces by any of the teachings in the cited reference without hindsight knowledge of the present claims. Using the claims of the present invention as a road map is prohibited and fails to sustain an obviousness rejection.

Furthermore, the functionality of the adhesives of Blake and the present invention are sufficiently different that one of ordinary skill in the art would be unable to make an adhesive that bonds to an adherent in the presence of water (as in the present invention), without referring to the claims of the present invention. Furthermore, a "wet stick" adhesive does not disperse in water, the present invention mains cohesiveness and stickiness in the presence of water, unlike the adhesive of the cited reference. Since water dispersible adhesives break down in the presence of water, water dispersibility is not a desired characteristic of an adhesive that exhibits "wet stick." Rather a water dispersible adhesive is completely contradictory to an adhesive that exhibits stickiness and cohesiveness in the presence of water. To function properly, the adhesives of the present invention must retained cohesiveness, a property that is opposite of dispersibility, as taught in the cited reference.

Appellants respectfully request that the 35 U.S.C. § 103(a) rejection of the claims be withdrawn. Further, Appellants do not believe that there has not provided with specificity any passage in the cited reference that there is motivation within that cited reference to modify the cited reference without any referral to Appellants' claims.

In view of the contrary teachings and lack of motivation or expected outcomes, Appellants respectfully submit that the claims of the present invention are patentable over the cited reference and that the 35 U.S.C. § 103(a) rejection cannot be sustained and should be withdrawn.

## CONCLUSION

For the foregoing reasons, appellants respectfully submit that the Examiner has erred in rejecting this application under 35 USC §§ 102(b) and 103(a). Please reverse the Examiner on all counts. Appellants respectfully suggest this paper is fully responsive to the Office Action

and the remarks and amendments have resolved the Examiner's outstanding objections and rejections. However, if after fully considering Appellants' response, there are issues remaining, Appellants request the Examiner telephone the undersigned to timely resolve any remaining issues.

Respectfully submitted,

10 January 2003
Date

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## APPENDIX

1. A wet stick pressure sensitive adhesive comprising the polymerization product of:

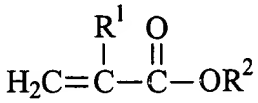
(a) about 30 to about 70 parts by weight of an (meth)acrylate ester monomer wherein the (meth)acrylate ester monomer, when homopolymerized, has a Tg of less than about 10°C;

(b) about 70 to about 30 parts by weight of a hydrophilic acidic comonomer; and

(c) about 10 to 100 parts based on 100 parts (a) + (b) of a non-reactive plasticizing agent,

wherein the pressure sensitive adhesive adheres to wet substrate surfaces.

2. The wet stick pressure sensitive adhesive according to claim 1 wherein the (meth)acrylate ester monomers have the following general formula:



wherein $R^1$ is H or $CH_3$, the latter corresponding to where the (meth)acrylate monomer is a methacrylate monomer and $R^2$ is linear or branched hydrocarbon groups and may contain one or more heteroatoms and the number of carbon atoms in the hydrocarbon group is about 4 to about 12.

3. The wet stick pressure sensitive adhesive according to claim 2 wherein the (meth)acrylate ester monomer is n-butyl acrylate, 2-ethylhexyl acrylate, isooctyl acrylate, lauryl acrylate, or mixture thereof.

4. The wet stick pressure sensitive adhesive according to claim 1 wherein the hydrophilic acidic monomer is ethylenically unsaturated carboxylic acids, ethylenically unsaturated sulfonic acids, ethylenically unsaturated phosphonic acids, or mixtures thereof.

5. The wet stick pressure sensitive adhesive according to claim 4 wherein the hydrophilic acidic monomer is an ethylenically unsaturated carboxylic acid.

6. The wet stick pressure sensitive adhesive according to claim 1 wherein the plasticizing agent is selected from the group consisting of polyalkylene oxides, alkyl or aryl functionalized polyalkylene oxides, benzoyl functionalized polyethers, monomethyl ethers of polyethylene oxides and mixtures thereof.

7. A coated article comprising a backing/liner coated with the wet stick pressure sensitive adhesive of claim 1.

8. A method for preparing a wet stick pressure sensitive adhesive comprising the steps of:

(a) combining a solventless polymerizable mixture comprising:

(i) about 30 to about 70 parts by weight of an (meth)acrylate ester wherein the (meth)acrylate ester, when homopolymerized, has a Tg of less than about 10°C;

(ii) about 70 to about 30 parts by weight of a hydrophilic acidic comonomer; and

(iii) about 10 to 100 parts based on 100 parts of the sum of components (a) + (b) of a non-volatile, non-reactive plasticizing agent;

(b) polymerizing the solventless polymerizable mixture to form the pressure sensitive adhesive that adheres to wet substrate surfaces.

9. A method for preparing a wet stick pressure sensitive adhesive comprising the steps of:

(a) combining a solventless polymerizable mixture comprising:

(i) about 30 to about 70 parts by weight of an (meth)acrylate ester wherein the (meth)acrylate ester, when homopolymerized, has a Tg of less than about 10°C;

(ii) about 70 to about 30 parts by weight of a hydrophilic acidic comonomer; and

(iii) about 10 to 100 parts based on 100 parts of the sum of components (a) + (b) of a non volatile, non-reactive plasticizing agent;

(b) enveloping the polymerizable mixture in a packaging material;

(c) exposing the enveloped polymerizable mixture to sufficient radiation to polymerize the polymerizable mixture and to form the pressure sensitive adhesive that adheres to wet substrate surfaces.

10. A method for preparing a wet stick pressure sensitive adhesive comprising the steps of:

(a) preparing a prepolymeric syrup comprising:

(i) about 30 to about 70 parts by weight of an (meth)acrylate ester wherein the (meth)acrylate ester, when homopolymerized, has a Tg of less than about 10°C; and

(ii) about 70 to about 30 parts by weight of a hydrophilic acidic comonomer;

(b) combining the prepolymeric syrup with about 10 to 100 parts based on 100 parts of the sum of components (i) + (ii) of a non-reactive plasticizing agent to form a mixture/blend;

(c) exposing the enveloped polymerizable mixture to sufficient radiation to polymerize the polymerizable mixture and to form the pressure sensitive adhesive that adheres to wet substrate surfaces.